

## Advanced Developing on AWS

### Course Summary

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#### Description

The Advanced Developing on AWS course uses the real-world scenario of taking a legacy, on-premises monolithic application and refactoring it into a serverless microservices architecture. This three-day advanced course covers advanced development topics such as architecting for a cloud-native environment; deconstructing on-premises, legacy applications and repackaging them into cloud-based, cloud-native architectures; and applying the tenets of the Twelve-Factor Application methodology.

#### Objectives

By the end of this course, students will be able to:

- Analyze a monolithic application architecture to determine logical or programmatic break points where the application can be broken up across different AWS services.
- Apply Twelve-Factor Application manifesto concepts and steps while migrating from a monolithic architecture.
- Recommend the appropriate AWS services to develop a microservices based cloud native application.
- Use the AWS API, CLI, and SDKs to monitor and manage AWS services.
- Migrate a monolithic application to a microservices application using the 6 Rs of migration.
- Explain the SysOps and DevOps interdependencies necessary to deploy a microservices application in AWS.

#### Topics

- Interfacing with AWS Services
- Deconstructing a monolithic architecture
- Migrating to the cloud
- Creating an infrastructure
- Declare and isolate dependencies
- Storing configuration in the cloud
- Establish a build, release, run model
- Creating the codebase
- Deploying an application
- Evolution of architecture
- Design patterns
- I/O explosion and preventing it
- Microservices

#### Audience

This course is designed for experienced software developers who are already familiar with AWS services.

#### Prerequisite

We recommend that attendees of this course have the following prerequisites:

- In-depth knowledge of at least one high-level programming language
- Working knowledge of core AWS services and public cloud implementation
- Completion of the Developing on AWS course, and then a minimum of 6 months of application of those concepts in a real-world environment

#### Duration

Three Days